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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/733,626  | 12/11/2003  | Chi-Hui Lin          | 10113421            | 8636             |
| 34283   | 7590        | 04/04/2005           | EXAMINER            |                  |
| QUINTERO LAW OFFICE<br>1617 BROADWAY, 3RD FLOOR<br>SANTA MONICA, CA 90404 |             |                      | NHU, DAVID          |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2818                |                  |

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

10/733,626

Applicant(s)

LIN, CHI-HUI

Examiner

David Nhu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

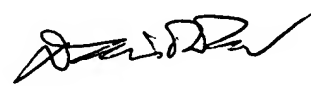
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.


**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTIONS

### Claims Objection

1. Claims 14, 20, 21, "**the** bottom of each long trench" lacks a clear antecedent basis. Also, claim 14, " forming a second insulating layer in each long trench", where is a first insulating layer?

### *Double Patenting*

2. **Claims 14-37** of the application No. 10/733,626 are rejected under the judicially created doctrine of obviousness-type double patenting over **claims 12-30 of U. S. Patent No. 6,818,948 B2** since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

*The subject matter claimed in the instant application and similar language recited in the patent claims obviously depict a similar method having either same steps and/or same materials, and such is also disclosed in both the patent and the instant application.*

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14 is rejected under 35 U.S.C. 102(b) as being anticipated Lin et al (6,093,606).

**Regarding claims 14**, Lin, (see figures 1E-1L, 2E-2L, col. 3, lines 10-67, col. 4, lines 1-67, col. 5, lines 1-58) teaches a method of fabricating stacked gate flash memory cells 10, comprising the steps of: providing a substrate 11; forming a plurality of parallel long trenches 18 along a

first direction in the substrate; forming a conductive layer PS1 and a pair of source S regions on a bottom of each long trench, wherein the source regions are respectively disposed in the substrate adjacent to two sidewalls SO of the each long trench and electrically connected to the conductive layer; forming a source isolation layer 16 on each conductive layer FG; forming a tunnel oxide layer 22 on two sidewalls of each long trench, contacting the source region thereby; forming a pair of floating gate FG on the source isolation layer 16, respectively contacting the tunnel oxide layer; forming a pair of inter-gate dielectric layers 30, respectively overlying the floating gate; forming a pair of control gates CG, respectively overlying the inter-gate dielectric layer; forming a second insulating layer 34 in each long trench, isolating the control gates; forming a plurality of parallel STI 18 regions along a second direction, defining a plurality of cell trenches; and forming a drain region D in the substrate 11 adjacent to each cell trench 18.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lin'948, Lin'856, Wu'506 are cited as of interest.
6. A shortened statutory period for response to this action is set to expired 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see 710.02 (b)).
7. Any inquiry concerning this communication on earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM. The examiner's supervisor, David Nelms can be reached on (571)272-1787.

Application/Control Number: 10/733,626

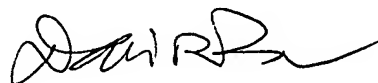
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*The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956

David Nhu



March 31st, 2005